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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,045	01/06/2005	Lieven Depuydt	2004_1983A	3629

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT PAPER NUMBER

1711

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/518,045

Applicant(s)

DEPUYDT ET AL.

Examiner

Terressa M. Boykin

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1711

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

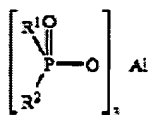
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

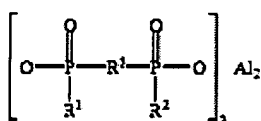
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 3, 5, 7, 8, 9, 11, 12, are rejected under 35 U.S.C. 102(a, b, or e) as being anticipated by USP 6194605 abstract, cols. 2-3 and claim 1.

USP 6194605 discloses a process for preparing aluminum salts of dialkylphosphoric acids. Specifically, the reference discloses the preparation of aluminum dialkylphosphinite(s) and alkylated diphosphinate(s) directly from ester which comprises heating ester with aluminum hydroxide in saturated aliphatic monocarboxylic acid, preferably in autoclave, useful as flame retardant for polyester or polyamide molding composition.



(I)



(II)

Art Unit: 1711

(I) and (II) are valuable flame retardants for polyester and polyamide molding compositions.

(I) and (II) are normally prepared by reacting the aqueous acid

solution with metal carbonate or (hydr)oxide. (III) and (IV) are prepared by hydrolyzing

phosphonite esters with excess water under pressure at 180 deg. C but good yields

are obtained only if the alcohol formed is removed from the gas

phase in the autoclave. The present direct process is not very costly, uses readily

available ancillaries and is much quicker than usual. It gives high yields of (I) and (II)

with high purity.

As noted above the reference discloses that the phosphinite ester having P-O-C bonds which is prepared via hydrolysis may be used in polyesters.

The reference also discloses that the aluminum salts of phosphinic acids are useful flame retardants for polyester and polyamide molding compositions. They are prepared from the phosphinic acids in aqueous solution with metal carbonates, metal hydroxides or metal oxides. Note claim 1 and example

The reference discloses a phosphorous containing polymer or polyester prepared from the same components as claimed by applicants. Any properties or characteristics inherent in the prior art, e.g. water-thinnable or radiation curable, or although unobserved or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". In view of the above, there appears to be no significant difference between the reference(s)

and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

35 USC 112, Second Paragraph

Claims 11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language "obtainable by" (rather than ---obtained by---) as well as such allied terms as "derivable from", "preparable from", etc. fails to particularly point out and distinctly claim the invention since one cannot determine from the phrase just which compositions are "obtainable by" applicants' process and which are not. Note further, that the recited "obtainable by" is incorrect terminology and is unclear as to whether the process for preparing such is limited to the specific method as claimed.

35 USC 103

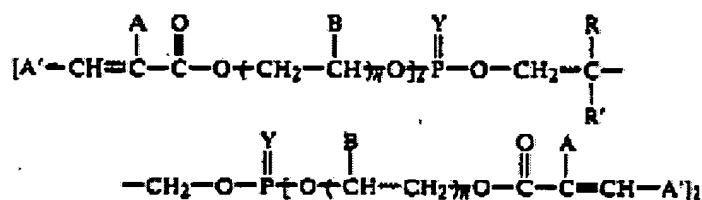
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1711

Claims 6, 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6194605 see abstract, claims in view of USP 4269727.

The reference **USP 6194605** discloses a phosphorous moiety which may be used as a flame retardant agent with a polyester prepared from the same components as claimed by applicants except for particular layer or coating of a substrate with the polyester made therewith. However, **US 4269727** discloses effective radiation curable flame retardant compositions include compounds of the formula:



This invention provides novel radiation curable flame-retardant compositions of normally flammable materials containing certain unsaturated phosphate compounds. The compound is used as a coating for various substrates such as panels.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a polyester made with the phosphorous composition prepared in USP '605 in the radiation curable flame-retardant Composition of USP '727 which is used as a coating for various substrates such as panels.

With regard to applicants claim 6, the reference **USP 6194605** discloses a phosphorous moiety which may be used as a flame retardant agent with a polyester prepared from the same components as claimed by applicants except for particular use of methacrylate groups. Note that **US 4269727** discloses that a variety of copolymerizable monomers are available and suitable and include alkenyl aromatic

Art Unit: 1711

monomers, alkyl esters of acrylic and methacrylic acid, acrylic and methacrylic acid, and the like and mixtures thereof. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a polyester comprising a methacrylate group prepared in USP '605 in the radiation curable flame-retardant Composition of USP '727.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6194605 see abstract, claims.

Claim 1 of the reference discloses that the reaction is done in the presence of a solvent. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the solvents as disclosed in applicants claim 4 since such solvents are well known in the art as suitable solvents for polymer process especially with regard to polyesters.

Obviousness-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

Art Unit: 1711

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/471020. Although the conflicting claims are not identical, they are not patentably distinct from each other because each is directed to a process for preparing a phosphorus-containing polymer precursor which is radiation-curable. Although the '020 application further states that the precursor is substantially halogen-free, the polyester produced in the current application, when defined in terms of the specification, could also be halogen free.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

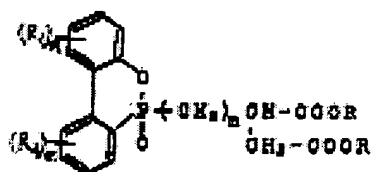
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2001-159050 see abstract; or JP55-060524 see abstract .

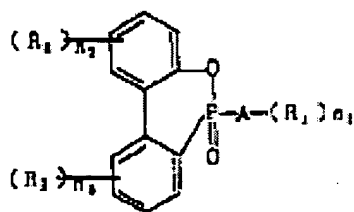
JP 55060524 discloses polyesters usable for surface modifiers or adhesives of

textile products, prepared by copolymerizing a compound having a metal sulfonate group, a polyalkylene glycol, and a specific phosphorus-containing carboxylic acid.

(A) An ester-forming bifunctioned compound having a metal sulfonate group, preferably a 5-sodium isophthalate, or (B) a polyalkylene glycol having a molecular weight of $400 \sim 10,000$, or both are copolymerized with (C) a phosphorus-containing carboxylic acid having the phenanthrene skeleton of the formula:



USPub 20040116651 discloses obtaining a stable antimicrobial stretchable fiber fabric excellent in durability of antimicrobial properties and drapeability according to a simple method. This antimicrobial stretchable fiber fabric is characterized as comprising antimicrobial fibers having hydrolyzed residues of a phosphorus-containing compound represented by the following general formula (1)



Each of the references discloses a phosphorus-containing polymer prepared from the same components as claimed by applicants. Any properties or characteristics

Art Unit: 1711

inherent in the prior art, e.g. water-thinnable or radiation curable, or although unobserved or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". In view of the above, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
Art Unit 1711